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SOCIAL SCIENCE ASSOCIATION.

THE RELATION

OF THE

Modern Municipality to the Gas Supply.

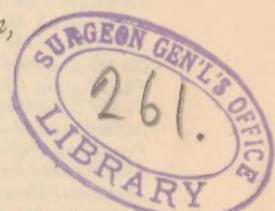
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BY

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PAPERS READ BEFORE THE ASSOCIATION.

Papers out of Print are not included in this List.

- The work of the Constitutional Convention.* By A. Sydney Biddle.
What shall Philadelphia do with its Paupers? By Dr. Isaac Ray.
Proportional Representation. By S. Dana Horton.
Statistics Relating to Births, Deaths, Marriages, etc., in Philadelphia. By John Stockton Hough, M. D.
On the Value of Original Scientific Research. By Dr. Ruschenberger.
On the Relative Influence of City and Country Life on Morality, Health, Fecundity, Longevity, and Morality. By John Stockton Hough, M. D.
The Public School System of Philadelphia. By James S. Whitney.
The Utility of Government Geological Surveys. By Prof. J. P. Lesley.
The Law of Partnership. By J. G. Rosengarten.
Methods of Valuation of Real Estate for Taxation. By Thomas Cochran.
The Merits of Cremation. By Persifor Frazer, Jr.
Outlines of Penology. By Joseph R. Chandler.
Hygiene of the Eye, Considered with Reference to the Children in our Schools. By Dr. F. D. Castle.
The Relative Morals of City and Country. By William S. Pierce.
Silk Culture and Home Industry. By Dr. Samuel Chamberlaine.
Mind Reading, etc. By Persifor Frazer, Jr.
Legal Status of Married Women in Pennsylvania. By N. D. Miller.
The Revised Statutes of the United States. By Lorin Blodget.
Training of Nurses for the Sick. By John H. Packard, M. D.
The Advantages of the Co-operative Feature of Building Associations. By E. Wrigley.
The Operations of our Building Associations. By Joseph I. Doran.
Free Coinage and a Self-Adjusting Ratio. By Thomas Balch.
Building System for Great Cities. By Lorin Blodget.
Metric System. By Persifor Frazer, Jr.
Cause and Cure of Hard Times. By R. J. Wright.
House-Drainage and Sewerage. By George E. Waring, Jr.
A Plea for a State Board of Health. By Benjamin Lee, M. D.
The Germ-Theory of Disease, and its Present Bearing upon Public and Personal Hygiene. By Joseph G. Richardson, M. D.
Technical Education. By A. C. Rembaugh, M. D.
The English Methods of Legislation Compared with the American. By S. Sterne.
Thoughts on the Labor Question. By Rev. D. O. Kellogg.
On the Isolation of Persons in Hospitals for the Insane. By Dr. Isaac Ray.
Philadelphia Charity Organization. By Rev. Wm. H. Hodge.
Public Schools in their Relations to the Community. By James S. Whitney.
Industrial and Decorative Art in Public Schools. By Charles G. Leland.
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The Pending School Problems. By Professor M. B. Snyder.
Municipal Government. By Wm. Righter Fisher.
Social Condition of the Industrial Classes. By Lorin Blodget.
Progress of Industrial Education. By Philip C. Garrett.
A Plea for Better Distribution. By Charles M. Du Puy.
Milk Supply of our Large Cities, etc., etc. By J. Cheston Morris, M. D.
Alcohol. By A. C. Rembaugh.
Sanitary Influence of Forest Growth. Dr. J. M. Anders.
Outline of a Proposed School of Political and Social Science. By Edmund J. James, Ph. D.
The Organization of Local Boards of Health in Pennsylvania. By Benj. Lee, A. M., M. D., Ph. D.
Manual Training a Valuable Feature in General Education. By C. M. Woodward, Ph. D.
The Gas Question in Philadelphia. By Edmund J. James, Ph. D.

THE RELATION OF THE MODERN MUNICIPALITY TO THE GAS SUPPLY.

One of the most interesting phenomena connected with our modern political development in general, is the slowly but ever-changing attitude of the government toward the industry of society. When Adam Smith published his immortal work on the Wealth of Nations, a little more than a hundred years ago, the industry of the world was bound about by a set of governmental restrictions which were slowly but surely crushing out the life which it was intended to nourish and regulate. Laws and regulations which, in their inception had, perhaps, been fully justifiable, had so far outlived their usefulness, that they were doing enormous harm and injury by their continuance. It was the great and imperishable service of Smith that he sounded the war cry of death to these old obstructions which formed an impassible barrier to future industrial progress, and secured to the immediately following and to all future generations the great advantage of an enormously increased production.

But, like all great revolutions, this movement also rushed into an untenable extreme.

The argument of Smith for a greater freedom from the governmental restrictions of his time—unanswerable as against certain abuses which he had in mind—was used by his successors to prove that government could best protect the interests of society by a policy of do-nothingism. This purely negative theory of government functions became at one time so prevalent, that it led our modern government to adopt what relatively speaking, may be called a system of *laessez-faire*—of letting everything take care of itself, which has resulted disastrously in a thousand ways. Under the immense impetus of new discoveries in industrial processes and of tolerable freedom of faction, so far as the restraining influence of government is concerned, private enterprise went forth into every field. Not content with developing new wealth by which it should be enriched, it sought out and set in order many ways of establishing artifi-

cial monopolies by which it might absorb a large portion of existing wealth. So successfully has this system been followed, that the great problem before the modern world is again the same which presented itself to the mind and times of Adam Smith, viz: How shall we set our industry free from the bonds which bind and cramp it—only in our time the bonds are those which have been made and applied, and are all the while being drawn more tightly by private enterprise and ingenuity, while in Smith's time, they were the bonds of government interference and restriction. Smith called upon private enterprise to check and circumscribe government activity, we call loudly upon government to circumscribe and regulate private enterprise.

Our railroads, our telegraphs, our express companies, our telephone companies, our oil companies, our coal companies, our gas and water companies all taking their start under the domain of free competition, and growing into strength and vigor under its influence, have come to rely for their prosperity and increased earnings, not only on the actual increment of wealth which they contribute to the world's stock, but also on the absorption of a larger part of existing wealth by means of artificial monopolies, a state of things which will continually grow worse unless it be made to grow better.

The remedies proposed for this disease, have been legion in number and infinitely various in character. The one which is most popular with a certain class of extreme optimists and also with their near connections, the extreme pessimists, is that of letting everything alone. The disease is bound to grow worse and worse until the crisis is reached, after which it will take care of itself, and all will go well—say the optimists. They refuse to look the possibility in the face, that the patient may die, or if he recover, may carry about with him for an indefinite period the evidences of his disease in an impaired constitution or permanent deformity. The pessimist says, "let him die. It is all one." Another remedy which is the favorite proposal of another class of extremists, is to hand over everything to the management of government. When the agent of society, say this class, manages these and similar undertakings, they will be administered in the interests of the whole as opposed to those of a part of society, and in this way the problem will solve itself.

With neither of these classes do I sympathize. Improvement in government and society will not come about of itself any more than improvement in the individual or the type. Human progress depends largely on conscious human effort, put forth in accordance with a conscious purpose. On the other hand we can not find any panacea for our social evils. The results of handing everything over to government are ruinous. The results of remanding everything to private enterprise are equally ruinous. The proper place to draw the line can not be ascertained by any general rule now within our knowledge. We must investigate each case on its own merit. I wish, on this occasion, to take up one of the most important questions relating to municipal government, now before the public, viz: The relation of the modern municipality to the gas supply.

I shall first touch upon the relation of gas to the needs of modern society, then notice briefly the peculiar nature of the gas business and draw the plain inference in regard to its relations to city governments. I shall then take up the question of the relative merits of public and private management in general, and close with a few remarks on the concrete question now before the citizens of Philadelphia.

A very superficial consideration of the case will, I am sure, be sufficient to convince anyone that an ample supply of pure and strong gas at low prices has become an absolute necessity of every modern city. The idea of a necessity of life, it is true, is a purely relative one, and can not therefore be made the subject of an absolute definition like a mathematical concept. Our notion of what is indispensable to our lives changes from time to time. But we may almost measure the progress of civilization itself by the increase in the number of those things which have become absolutely necessary to our daily existence and comfort. It has not been so very long since soap was ranked as a luxury, and it is within the memory of men now living, that matches have gone from the category of luxuries to that of necessities. Gas has become a necessity of life in several relations. As a means of illumination it is of course practically indispensable. The introduction of gas into the dwelling houses of our modern cities has diminished in a very perceptible degree the labor of lighting the house, and is from this point of view a

great labor-saving device. The end and aim of social reforms in this direction should be to secure such low prices of gas as would enable even the poorest householder to dispense with the crude and time-devouring system of lamp illumination. The use of gas as a means of illuminating places of manufacturing and business is of course an absolute necessity. The labor-saving element is so evident in this case, that no city could think of going back to the old system unless it had become reconciled to the thought of giving up the attempt to keep pace with the advance of its sister cities.

Gas is coming more and more into use as a means of cooking and driving machinery. There is probably no department of household expenses in which there is uniformly more waste than in that of the fuel supply. In our best ranges the loss of unutilized heat is enormous even where the coal is fully consumed. But one need only to examine the ash heaps, where the refuse of the ranges is deposited, in order to see that nearly as much again is wasted, owing to the incomplete combustion of the coal. The same thing is true of our heaters, perhaps in a larger degree than even of our ranges. In addition to this waste we must count the use of wood for kindling purposes, which is a very large item indeed in the course of a year. To all this, must be added the large expenditure of labor in getting the coal to the houses and the ashes away, to say nothing of the constant labor involved in caring for the heaters and ranges. Now a large proportion of all this waste could be saved if we would take to the use of gas as the ordinary means of cooking and heating in our houses. There is, at present, nothing in the way of this except custom and the high price of gas—a price which could be easily reduced to one-third of that at which it is at present sold here in Philadelphia, if the consumption would increase to the requisite extent. If gas were thus reduced in price it would come within the reach of small manufacturing establishments as a motor power in the driving of machinery. This would redound to the benefit of society in a thousand ways. It would enable it to do away with some of the most burdensome forms of physical labor. It would reduce the cost of production of many articles to the advantage of the consumer. As a matter of fact, some cities of the world have furnished gas at such low

rates for this purpose that it has become the decisive element in the ability of the citizens to compete with their rivals in other cities and countries.

We talk about protecting the home producer by a protective tariff, and insist on high duties, when the most sensible course oftentimes would be to take such measures as would place the home producer on a level with his foreign competitor by placing within his reach the productive opportunities which are at our disposal.

In a word, then, gas has become indispensable to the comfort of the home and the efficiency of trade and industry. Its uses are almost infinite, and its application becomes more general in proportion to the reduction of the price. That country and that city which provides for a liberal supply of it at low prices may add enormously to its means of comfort, to the economy of the fuel supply, and to its power to compete with its commercial and industrial rivals, and conversely, the country and city which fail to do this must surely fall behind in this race for industrial supremacy or even in the attempt to hold their own.

Another fact is also evident to the most superficial observer and that is, that the gas business must, from its very nature, be a practical monopoly. This might be inferred from a simple consideration of the technical and administrative conditions of the manufacture and distribution of gas. It is also amply proven by the actual history of gas undertakings, both in this country and Europe.

In the first place, in order to undertake the gas business with a reasonable hope of profit, it is necessary to be able to control a large amount of capital. It is impossible, therefore, for a man of small means to start such an enterprise. It is ordinarily beyond the resources even of wealthy private men and it is usual to resort to the device of a joint stock company. This simple fact, that it takes a large capital to undertake the business, practically limits it to a very few men and tends to make it a monopoly in the hands of a company which has once fairly established itself, since the risks of going into it when a rival company has the field pre-empted and is better able to make prices which will drive the new company out of the field, are usually prohibitive of the enterprise.

In the second place, the gas business differs from such a business as the manufacture of shoes; for example, in that while it makes comparatively little difference where the shoes are manufactured since they can be easily sent to any desired point for consumption, the gas must be made near to the place of consumption. The opportunities for competition are thus enormously diminished in the latter business as compared with the former. If gas could be produced anywhere and bottled for consumption at distant places, the whole nature of the business would be changed and it would be much more difficult to establish a monopoly than at present. There is another point in which it differs greatly from such a branch of manufacturing as shoemaking which renders it easier to establish a monopoly, and that is that the process of manufacture produces a large number of most offensive odors, which almost constitute it a nuisance. It could not be allowed that every man who pleased should set up a gas factory on every street corner, even if other preliminaries of the business allowed it.

There is a third important peculiarity of the gas industry which contributes greatly toward making it a practical monopoly. This consists in its mode of distribution. In order to get to the consumers it must use the public thoroughfare in such a way as to constitute a serious impediment to business. This would be very evident, if it put its main pipes above ground in such a way that bridges would have to be built over them at every street crossing. It is scarcely less evident under the present system, which involves taking possession of the streets for a longer or shorter time, first to lay the pipes, and later in order to make repairs. The existence of the mains in the ground even after they are laid, constitutes a serious inconvenience, as is plain whenever a sewer is to be constructed or whenever an explosion occurs, as a result of the leaking of a main. Now, while we might allow almost any number of shoe dealers' wagons to travel along the streets, it is perfectly evident that we can not allow an indefinitely large number of gas companies to be tearing up the streets in order to lay or repair their pipes. The ravages of one company and that of a public one are enough to drive us almost distracted, to say nothing of the state of things which would exist if we were delivered into the hands of a half dozen.

This last consideration, which one would think were important enough of itself to decide this question, was noticed as long ago as 1822, in England, in which year a Parliamentary Commission reported against the advisability of giving a concession to rival companies in the same district.

Mr. William Richards, in his excellent work on the manufacture and distribution of coal gas, gives a short account of competition in England as a means of regulating gas prices, which is full of instruction for us on this point :

"The two or three first acts passed by Parliament in regard to gas companies authorized different companies to supply the same districts throughout the metropolis, and for a time opposition existed between the Chartered, the Imperial, and the City of London Companies in a portion of their districts. The attention of Parliament was, however, called at a very early period to the evils arising from this competition ; and Sir William Congreve, who was inspector of gas works, on reporting to the House on the matter, expressed the strongest disapprobation of it and recommended that no act should be passed without limiting the district of each company ; consequently, in all acts passed during several years, each of the companies were limited to a certain district under a heavy penalty for every light supplied beyond it.

"Other companies were, however, formed without statutory powers for supplying the metropolis, and in 1842 the principle which had been adopted in 1821 for preventing competition among the gas companies was abandoned, and an act was passed authorizing a comparatively new enterprise to supply districts already lighted by other companies, and closely following upon that were four or five other acts upon the same principle, thus strengthening the competition which had existed for years in certain parts of the metropolis, and brought on a state of affairs which can not be too strongly condemned.

"The competing companies laid their mains in all the leading thoroughfares where there was a large consumption ; hence, in some streets there were as many as six mains, and Oxford street was supplied from six different works. This state of affairs led to the greatest disorder, and in some instances, whether accidentally or by design, the main of one company was

connected with that of another, and by the frequent changes of supply the wrong service would be at times connected so that one company supplied the gas while another collected the payments. It was not an uncommon occurrence for a consumer on entering a house where there were three or more services, to state to the inspector of each company, in turn, that he had arranged to take the supply from the other company, and so kept out of the books of all the companies, and had his gas for nothing, which deception was favored through the secrecy observed by the various competing companies.

" This competition of companies made them reckless of their respective interests. Canvassers were employed not only to get new customers, but also to induce customers to change their supply to the company represented by the canvasser ; and the most extravagant offers were made, which consumers did not fail to take advantage of. Sometimes the company, in case of a large consumer, would refit the house and keep the fittings in repair. In other cases two or more burners were allowed on the premises without passing through the meter, and were, of course, not paid for ; or in the event of the nominal standard price being charged according to mutual agreement with the companies, a large discount was allowed on payment in order to disguise the bargain.

" Many consumers having driven a hard bargain with the company in the first instance, would report that more favorable conditions had been offered by a rival company and give notice of a change, when that supplying, rather than lose the customer, would consent to the same terms, and thus by the secrecy referred to, observed by the various enterprises, they were imposed on in every way by the unscrupulous portion of the consumers. Moreover, at one time no uniformity whatever existed in the charges, and premises were frequently lighted at one-sixth part of the value of the gas which they consumed ; the rule was, ' Take what you can get and get what you can, but don't lose the customer.'

" The loss by leakage was also large, which frequently occurred in consequence of the imperfect manner in which mains were laid and the repeated changes of service. Whenever the mains of two or three companies existed in the same

street, instead of the companies' officers co-operating with the view of detecting and remedying the escape, it was disregarded until the public authorities had to interfere and insist on the nuisance being abated ; hence, it was not surprising that accidents sometimes happened.

"Although a few consumers profited by this discreditable state of affairs, it was by no means advantageous to the general public and was ruinous to the gas companies, two of which at least during several years never paid a shilling of dividend to their shareholders, whilst the profits of the old companies were materially reduced. From these statements a faint idea of the evils of competition among gas companies may be formed ; but it did not cease here, as by the multiplicity of mains a large amount of capital was literally thrown away, upon which the public are now paying dividends. In addition to this, there was the frequent breaking up of the streets and stoppage of the thoroughfares for laying or altering the mains and services, or transferring the supply from one company to another, which at one time caused a universal outcry throughout the metropolis ; and on account of these proceedings the public mind was for a period kept in a constant state of irritation by the press, all of which proceeded from the encouragement that had been given to competition by the public.

"The result of all these difficulties was that the companies agreed among themselves to cease all competition, to confine their operations to separate districts without interfering with each other ; to discontinue all special arrangements and charge one uniform price over all parts of their respective districts. These proceedings caused in some instances an increased charge of from fifty to twenty-five per cent. and gave rise to considerable agitation in the metropolis ; public meetings were held and resolutions were passed to petition Parliament for an inquiry, which was eventually granted. At that inquiry the public and the companies were both represented, and after a careful investigation of all the circumstances the districting arrangements were confirmed and the companies secured in their respective districts, and all other companies or persons were prohibited from supplying gas without first obtaining the sanction of Parliament ; and a public act was passed embodying

these provisions, although at the time the companies considered that they were subjected to some very arbitrary regulations."

Simultaneously with this process of formally dividing the public among them as, so to speak, lawful prey a process of absorption was begun. In 1853, when the companies agreed to quit competing, there were some thirteen companies within the city of London. By 1860, when Parliament finally acknowledged that competition was out of place between gas companies, the number had been considerably diminished, and by 1883 the number had dwindled to three, and it is now, or shortly will be, reduced to two and perhaps to one.

Much the same course of events took place in other large English towns and cities. In France they began in the same way, but it soon became evident to the shrewd Frenchmen that such a course was ridiculous from every point of view—that of consumer as well as company. The companies in Paris were assigned particular districts as early as 1839, and in 1853 they were all consolidated. In Germany, although they followed the example of England at first, it did not take them very long to see the absurdity of pursuing such a plan for any great length of time, and they soon adopted a system of laws which recognized the inevitable, and acknowledged the monopoly nature of the gas business.

When one looks at the question from a wide view, as to the effect of competition among such companies, upon the economy of the supply of capital in the country, one wonders how any one could ever have thought that it would be a good thing to allow competition among them. Think for a moment what it implies. It involves at least two or three and even more works where one would be sufficient. It means two or three and even more mains where one would be ample. It necessitates a corresponding number of different services in each house, and an enormously large number of inspectors and collectors—and all for what? Cheaper gas? By no means. The enormous sums of capital which such a system wastes will certainly try to earn dividends in some way or other, and the only means is in high prices of gas, or else what amounts to much the same thing, in a poor quality. When the public is finally compelled to take hold of the matter in earnest, to remedy the abuse, as it always

must sooner or later, the large sums of wasted capital are always put forward as entitled to some consideration in fixing the rates.

We have had the same experience in this country exactly. The Philadelphia RECORD gave an account some time ago of the course of events in this respect in some of our American cities. A Committee of Congress in passing upon the application from a new gas company to lay its mains in the streets of Washington reported as follows :

It is bad policy to permit more than one gas company in the same part of the city. Experience has demonstrated that opposition gas companies are not beneficial, but that they are injurious to the interest of the citizens, and instead of promoting cheap gas they prevent and retard it by greatly increasing the capital necessary to carry on the business. To permit a competing company to enter in the business would be simply to increase the capital without increasing the business. Why should this be done when there is no good reason of public necessity for it, and when it amounts to a moral certainty that both companies will combine? When there are two parties to combine either will not long carry on a profitless business, and it is a well-known fact that every opposition gas company started in this country after a short term of competition, has either sold out, bought out, combined or pooled earnings with the old company. While the brief competition lasted, of course cheap gas prevailed, but when the inevitable combination takes place the people are made to pay the expenses of the war on a greatly increased capital. It seems that no law has yet been enacted that can prevent such combination, and there is no law that can prevent the individual stockholder buying the stock of the other company. Upon these and other good grounds the authorities of Boston and Cincinnati have refused to permit competing companies, and the citizens of those cities are enjoying cheaper gas than in the cities where competition was allowed. In England competing companies are forbidden by law, and existing companies are allowed to make 10 per cent. on their investment. Hence the cities of the British Islands have the cheapest gas in the world. The prime cause of this cheap gas is that they have not excessive capital to earn dividends on. Opposition gas companies have not been capitalized on the old ones.

Every American city which has permitted competing gas companies to lay pipes in the streets has suffered through the consolidation of the companies, the capital having been increased, and the consumers forced to pay higher prices for their experience. The following cities have received this treatment:

New Orleans,	Providence, R. I.
Charleston, S. C.,	Brooklyn,
Memphis, Tenn.,	Jersey City,
St. Louis, Mo.,	Newburg, N. Y.,
Chicago,	Trenton, N. J.,
Buffalo, N. Y.,	Harrisburg, Pa.,
Detroit, Mich.,	Lancaster, Pa.,
Albany, N. Y.,	Baltimore, Md.,
New York City,	Savannah, Ga.,
Poughkeepsie, N. Y.,	Patterson, N. J.

Before consolidation the price of gas in New York city was seventy-five cents per thousand feet, but as soon as the six companies came together they watered their capital from \$18,508,920 to \$39,078,000, and raised the price of gas one dollar per thousand feet, making it one dollar and seventy-five cents.

In Baltimore the price of gas was advanced seventy-five cents per thousand feet; In Harrisburg it was raised from one dollar to two dollars; in Patterson, N. J., and in Savannah, Ga., the price was also raised.

In Detroit, Mich., a stringent charter was granted upon the filing of a bond to secure the city against the possible combination of the old company with the new one; but in spite of this iron-clad agreement a combination was effected, and the people were forced to pay not only all the expense of the gas war and the duplication of works but also a large dividend on an inflated capitalization.

Such being the fact, it remains for us to choose between monopolies in the hands of private parties and monopolies in the hands of the government. It was at one time in the history of modern nations no uncommon thing for the government to grant to private persons trade monopolies of all kinds. It amounted practically to giving to private persons the right to plunder the public to any extent within the limits of the possi-

ble. The government derived the advantage of whatever sums the parties could be persuaded to pay for the privilege. Some of these monopolies were granted for purely personal reasons, in order to enrich favorites of the men in power, whether it was a king or an aristocracy. Since we have come to have a different view of the relations of government and governed, so that we now insist that any special privileges shall be granted, not for the benefit of the government in the narrow sense, but for the advantage of the public, we no longer regard such grants as legitimate. It is now an axiom that no special privilege shall be granted except in order to further the public interest. The granting of a monopoly can be justified therefore, nowadays, only on the ground that such a plan is the best means of securing some public benefit. It goes, then, almost without the saying that in case such a monopoly is granted it must be attended with such restrictions and conditions as will secure the interests which it is intended to further, viz., those of the public. We cannot think of conferring upon private individuals the absolute right to a certain branch of business, and then let them exploit the public at their discretion. That is to say, we must subject the company receiving a monopoly to the strictest supervision on the part of the public. Our choice, then, is still further limited, viz., to a regulated monopoly in the hand of private parties on the one hand, and public management on the other. When the case is presented in this form, and who can deny but what this is the correct form, that is, the form which actually corresponds to the facts of the industrial world around us, we get from the very first a correct insight into the real problem which confronts the city government of our modern state.

It would seem at first blush that there could be only one sensible answer to the question which form we should adopt. It would appear almost as a matter of course that, if it is necessary to organize a monopoly in order to secure the interests of the public, this monopoly should be within the control and management of the public. Public ownership is, therefore, the natural system in all cases of necessary monopolies.

If any one proposes, then, to confer the grant of a monopoly of the manufacture of a prime necessity of life upon private persons, the burden of proof must lie upon him. He must prove

beyond a peradventure that the interests of the public can be best secured by that system, since the whole presumption is against his position. With this fact kept in view let us examine the arguments pro and con in regard to the benefits of public and private management.

The first ground commonly advanced against public ownership and management is the old and threadbare statement that the state has no business to engage in industrial enterprises. Such general statements as this are the ordinary refuge of ignorance and selfishness. It is the usual position of those who have not taken the time to study the history of government action in ancient and modern times, or who are interested in preserving the *status quo* because they are enabled to profit by the general prevalence of such an idea in the community at large. The same kind of argument has been advanced not only in this field, but also in nearly every other one as well, to keep the government from assuming and performing the new duties which come to it with every passing year.

It is by such arguments as these that the government was kept for years from assisting in the establishment of free schools, from adopting laws in regard to the condition of factories and the working of women and children in the factories, from establishing public asylums for the unfortunate classes of the community, from establishing public bath houses, etc., etc. In a word, whenever it has been proposed that society should undertake in earnest the work of improving the conditions of life in its midst by such means as promised to be of value, we have been met by this class of chronic objectors and alarmists who have loudly cried out "it is not the business of the state to do any of these things." If we had taken counsel of this class we should have had to-day no free schools, no sanitary regulations, no safeguards of life and liberty such as we now have in many different fields; we should be in a sorry way indeed.

Perhaps this point is important enough to merit a digression of some length. What are the true functions of government? How shall we determine the proper limits of state interference? In every period of human history there have been political theorists who have attempted to define and point out the true functions of government. They have attempted to draw a sharp

line between those things which a state may and the things which it may not do. One set have laid down the general principle that it is the sole business of government to protect the life, liberty and property of its citizens. There might not be much objection to this statement, if the proposers of the theory would give all a sufficiently broad interpretation to the theorem, but they have usually limited the meaning to a very narrow field. For example, if a railroad makes a discrimination in its charges as between citizens, it destroys the value of property just as certainly as if it took a force of men and marched to the place and destroyed one of the buildings belonging to one party. And the interference of government in such a case is justified simply on the ground that it should protect the rights of property. But the adherents of this theory have usually taken a very narrow view of the range of the fundamental hypothesis. Another set of theorists have added to the proposition stated above that the state may also undertake to establish and support those institutions which can never become profitable to private individuals, but which it might well repay the community to establish and support. Still other theorists have added those institutions, which, although they might be profitable to private persons and are necessary to the public welfare, are by their nature monopolies, and should therefore be in the control of the state rather than in the control of private parties who would exploit the public as far as possible.

None of these theories have been satisfactory and that for a very good reason. It must appear plain to every one who gives even a slight attention to the subject, that the attempt to determine the true functions of government in general is idle, for the simple fact that they are different for different conditions. It is plain that the government of the civilized people may—nay, must—do many things which for the government of a barbarous people, are utterly out of the question. Think for an instant, of trying to limit the functions of such a government as ours, to the same number, and identical forms which are appropriate for a tribe of American Indians. The mere statement is absurd; and yet, if there are certain true functions of government in an absolute sense, they must apply equally to the Indian and to the citizen of Philadelphia. The “true” functions of government,

are local and temporal in their nature, they vary with different stages of civilization, with different peoples, with different times, etc., etc. It is useless therefore to try to lay down any rule, or law which shall be equally applicable to all states and conditions, for all times and places. John Stewart Mill has perhaps expressed this fact most happily. He says in one place, in his treatise on political economy, that it is difficult to lay down any general rule, except the vague one of general expediency, and that no function should be assumed, unless the grounds in its favor are very strong; in another place he remarks that the ends of government, are as comprehensive as those of the social union, they embrace all the benefit, and all the immunity from evil which government can be made to confer. The particular things which a government can do with advantage to the society which establishes it, vary with the social state, the form, and organization of the government, etc.

The proper functions of government are then, not absolute, but relative, and they change with an advancing civilization. Those then who say, that the state should not undertake the manufacture and distribution of gas, because it is not the business of the state to engage in industrial enterprise, may be answered in various ways. In the first place, they assume the whole point in dispute when they lay down this broad proposition. There is in the very nature of the case no general principle to which they can appeal in order to prove their point, except the very proposition which they are to prove; again, it is evident from certain facts in our system of government, that we, as a people, anyhow do not believe in this as a general principle since our government as a matter of fact does engage in various forms of industrial enterprise, and that so successfully that nobody proposes to exclude it from this sphere. Take for example the most general form of government—the Federal. It runs the post-office which is a gigantic industrial enterprise, and one which looked at as a social institution pays enormous profit to our society. We all agree that the government should retain this institution. Many people think that it should also undertake the telegraph. It would be safe to say that a very great majority of the people would favor such a measure if they were not afraid that such a move would increase to too great

extent the patronage of political parties, *i. e.*, they fully believe that it would be a legitimate government enterprise, but are opposed to the actual assumption of such business on the part of the government solely on grounds of expediency. Many of our people look upon the express business in the same light, while one of the most eminent jurists in the United States has lately given it as his opinion, after a thorough investigation of the elements in the case, that it will not be many years until the people of the United States will regard it not only as the legitimate business of government, but also as its imperative duty to assume the management of the railway system of the country; that the time will come when it will be regarded as just absurd to let private individuals run the railroads as it would now to propose to hand over to the same people the management of all the wagon roads in the country. Whether this be so or not, the fact that such a man holds such an opinion is sufficient to show how our ideas on this subject of government interference change with time and circumstance.

In the sphere of local government we see instances of the same kind. It has now become the rule in our American cities for the city to own and manage its own water works. Now and then it is true we hear the sentiment expressed that this is also not a proper business for the city corporation, but the voices are so few and so weak with the exception of those who are trying to get possession of the works for their private enrichment, that they have no great influence. When we come nearer home and ask what the people of Pennsylvania think about this question, we find that they believe fully that it is a legitimate function of city government to look out for the wants of the citizens in regard to water and gas since they have incorporated in their laws full permission to establish and operate both gas and water works. I have given more attention to this point than it merits in this immediate connection, because we hear so much about the true functions of government from certain parties on every public occasion, that, unless we stopped and looked into the matter, we might suppose that there really is some patent means by which we can determine in each individual case, whether it falls within the charmed circle of legitimate government functions without taking the trouble to investigate the merits of the

particular case itself. The question whether any particular function should be assumed by the government, is a special problem which must be examined separately upon its own merits and not decided according to the a priori dictum of a political theorist.

If this point be well taken, we have only to examine the particular grounds for or against the private or public system of management. It is claimed in the first place then, in favor of the private system of ownership, and consequently in so far against the public system that private companies can manufacture more cheaply than the public corporation. Even if this were true it would not by any means follow that it would be for the interest of the public to allow private companies to get possession of this monopoly. For how would it help the public to know that private companies could manufacture cheaply, unless the latter would sell the gas more cheaply. This last is the important point. It does not follow by any means that the public would profit by this greater cheapness. The whole history of gas undertakings, both in this country and in Europe, is against any such claim as this. If it be a fact that the private company can manufacture more cheaply than the public, this only means, as a matter of fact, that a few men may get very wealthy out of the business if they can get the chance.

But let us examine this claim, that the private company can manufacture more cheaply than the public. What are the grounds usually advanced to support this proposition? It is said that the private owner has a more immediate interest in the business than the public officer, and that he will look more closely after the details of the business. He can prevent many little losses, which in the aggregate make up an enormous total. This is undoubtedly true of a business which is small enough to allow one man, *i. e.* the owner, to actually oversee and supervise the details of his business. This is not at all the case in a great undertaking where the owners are numerous and have to entrust the management entirely to paid agents. Even where the directors are taken from the number of stockholders, this does not by any means give a sure guarantee that the business will be carefully managed. The actual supervisors must be few in number, and it is often more to their advantage to follow their

interests as private individuals in a position to make great gains in illegitimate ways, than to secure large dividends on their stock—a state of things which exists in very many of our large undertakings, as many poor stockholders in this great country of ours can testify. A large company must depend on the faithfulness of paid agents just as much as the public in its management. Now, is it true that the employees of private firms are, as a rule, more faithful than the government officials? There is wide-spread impression, I am aware, that this is the case, but I do not think that it is true. It is certainly not true where there is a proper system of civil service. In Germany, for example, the private employers could count themselves happy if they could only secure as high a standard of probity and faithfulness to duty as the government secures in its service. There are indeed potent reasons why a government can secure this faithfulness more easily than private parties. Its service is associated with more dignity in the public mind. It is possible to develop an *esprit de corps* in the government service which no private firm, however great, could hope to secure.

A government which organizes its civil service on a sensible basis, can obtain more devotion and faithfulness by far than any large company, which, by the very plan of organization, must be as impersonal a body toward its employees as the state, without enjoying that universal regard and respect which is every where connected with government service, no matter how bad it may become.

The only advantage which a private company possesses over the government is, that it may offer large rewards for any extra keenness on the part of its employees, which result in bringing large profits to the concern. This policy is exceptional, however, even in the case of private companies, and the experience of other governments, and indeed of our own, is that scientific investigators in the government employ are just as eager and keen in the pursuit of science as though they were working for private companies, with the expectation of large reward. This extra keenness is moreover of special value only in speculative business in which the competition is close, and where everybody in the employ of a firm must be on the guard against the wiles of competitors. It has not very much place in a business like

that of a monopoly company, in whose case the inducements to trade lie chiefly in making a low price of gas in order to enable more people to become purchasers.

On the contrary, so far, from the industrial advantage being on the side of the private company in this comparison, there are some considerations which go far to justify the statement that the public can manufacture more cheaply than private enterprises. Since the gas company must be a monopoly, it is peculiarly liable to attacks from the public. Every few years a bitter attack is made upon the privileges. This state of things acts to make the value of the stock unsteady. There is an element of risk which must be made good by higher dividends during the periods of rest. The risks in the case of a private company are far greater from this cause than in the case of a public management, and these risks must be paid for in the only way which is open to the companies, viz.: higher prices of gas. So much for the theoretical argument in the case, which rather seems to be on the side of the public company.

When we turn to experience to find out what answer it makes to the question, whether private companies or public companies manufacture more cheaply, we shall not get a perfectly decisive answer, but it will be one which is quite as favorable to the public as to the private company. I have not been able to get the necessary statistics on this point in regard to American companies. They are, indeed, not attainable. Our private companies are interested in keeping their affairs as secret as possible, and we have no means of getting at the facts in the case.

In England the companies are compelled to report certain facts to the government from time to time, and some of these facts will be of use to us. During the year which ended March, 1884, the public companies in the United Kingdom of England, Ireland and Scotland, amounting to some one hundred and sixty, carbonized 2,450,541 tons of coal, from which they obtained 24,507,217,850 cubic feet of gas. This would give 10,000 cubic feet of gas to the ton. The private companies during the same time, carbonized 5,173,963 tons of coal, from which they obtained 52,333,749,763 cubic feet of gas. This would give 10,127 cubic feet of gas to the ton. This would

indicate that the private companies managed to get, on the average, about 127 cubic feet more per ton of coal than the public companies, which would represent about one per cent. advantage in this respect. There seems to be no appreciable difference in the per cent. of leakage and waste if one can infer anything in this respect from the difference between the actual amount of gas sold and that consumed, since the per cent. thus unaccounted for was almost identically the same; being in one case nine per cent. and in the other nine decimal one per cent. Of course, neither of these points is absolutely decisive since the economy in the manufacture of gas does not consist merely in the getting of the greatest number of feet of gas per ton of coal, but largely in the relation of the value of the residual products to the price of coal, and the process which results in giving the largest amount of gas per ton, often destroys the value of the residual products very materially. The difference between the amount actually sold and that manufactured, includes not only the waste, but also the amount consumed in the works, so that the results given above are only indicative of tendencies. There is another reason why the result given above does not justify us in inferring too much, and that is that the amount of gas derived from the ton of coal depends largely on the quality of the coal, and the report does not show whether there was not great difference between the different companies in regard to the kind of coal employed. But so far as the returns go, the showing is very favorable to the public companies. The general opinion in England seems to be that the gas furnished by the public companies is better than that made by private companies if one may infer anything in regard to that from the number of complaints in regard to the gas of the private companies. The management of many of the public companies is, according to the admission of prominent directors of private companies, almost a model in its character, and may serve to the private companies as examples of what gas works should be. The city of Leeds, in England, has reduced the price of gas to one shilling, and derives a handsome profit from the works at that price. All that the cities have to do is to pay enough to get good engineers, and they can have just as good works and just as cheap gas as any private company can possibly manufacture it.

The history of Germany in this respect is very similar to that of England. The public companies have made about as good a showing as the private companies, although in the first place they were erected in some cities which the private companies refused to enter, because the prospect for profit was not great enough. The city gas works of Berlin, which were built in 1846, and are therefore now nearly forty years old, are a model in every respect. They have served as the standard by which the other companies of Germany could measure their efficiency and success. The management of the works has been remarkable even in Germany, the land par excellence of good and cheap administration. The city has often realized as high as ninety and sometimes as high as ninety-five per cent. of the price of the coal used from the sale of the residual products. It is claimed by the private companies in Germany, that the cost of manufacturing in the works controlled by the city, is about three per cent. higher than in those controlled by private companies. Even if this be true, which is disputed, it is not sufficient to establish the superiority of private works over those of the public. It may then be fairly said that this claim set up for private works that they can manufacture more cheaply, has not been by any means proven, and that the evidence is ample that public works may be, and as a matter of fact, are managed quite as cheaply or indeed more cheaply than private works.

Right here in Philadelphia we have an example of a private company, the Northern Liberties, which, according to the Philadelphia *Record* of December, retains the most crude and old-fashioned methods. For instance, the ammonical liquor which can be sold for twenty-eight cents per ton of coal carbonized, is allowed to run to waste at the Northern Liberties Works, while even our Gas Trust manages to get four cents per ton for theirs. Two bushels of lime are used at the Northern Liberties in purifying one ton of coal carbonized, while in English works the proportion is one bushel of lime to each ton of coal. The old-fashioned furnaces in use there will produce 10,000 feet of gas from Penn Gas Company coal, using twenty bushels of coke under the retorts. With regenerative furnaces the Trustees could obtain 11,500 feet of gas from the same coal, with only twelve bushels of coke under the retort, saving eight bushels of coke, fifteen per cent. of coal and ten per cent. of labor.

This is nothing more than we might expect from a private company enjoying a monopoly under the law. The history of the Birmingham (England) works, in the hands of private parties and in the hands of the municipality, is full of instruction on this point. They were acquired by the municipality in 1875, and within four years the productiveness was just doubled. They were able to earn in 1875, at the time of purchase, £82,290, and in 1879, they earned £165,000. In this case and in many others municipal management has attained a profit of seventeen per cent., where private management only got eight and a half per cent.

Mr. Arthur Silverthorne, an eminent English expert from whom I shall quote again in another connection, says "that the event has since proved that nothing could be more felicitous than the way in which our municipal authorities have managed even the largest gas undertakings confided to their care, and I fearlessly assert that the unpaid bodies have achieved far superior results to those obtained under the directorate of private companies."

However this may be, of one thing we may all be certain, viz: That whatever may be true of the possibilities or actualities of cheap manufacture on the part of private companies, they rarely fail to fleece the public in the most merciless way, and they do not hesitate to resort to the most questionable devices to avoid the effective control of the public. Nearly every American city, beginning with New York and Boston, can afford most ample proof of this.

The next most important argument in favor of handing the business of making gas to private companies is, that in this way a great source of political corruption is removed from city politics. This argument is heard only in this country. It does not occur to foreign cities to allow their public works to become the source of political corruption in this sense. This argument can be met in two ways. In the first place the giving of such power to the private companies does not change the fact of political corruption if the conditions for such an abuse exist in the respective society. It merely changes the form. Private companies do not, perhaps, use their works as mere resting places for political henchmen, but they do what, in some respects, is

still more corrupting and ruinous in its influence on our politics, they go into the business of buying votes of councilmen and legislators by the wholesale. They resort to the most objectionable form of bulldozing in order to make their workmen vote for their particular candidates in the districts where their works are situated. The revelations in the reports of the New York Senate Committee of Investigation are sufficient to convince any but the most obstinate or stupid that the mere fact that the gas business is in the hands of private companies, does not give any guarantee that it is therefore no force in city politics. Consider, for a moment, what a power for evil a company with a capital of \$20,000,000, might be in all city affairs. It may be said that it would at least confine itself to gas questions and leave other questions alone, so that there would be some chance for the proper considerations to have influence in most questions. The history of gas companies does not justify any such bright hopes. In the first place, they always join hand in hand with every other monopoly in the community, be it a legal monopoly or not, in order to prevent any investigation or regulation of monopolistic abuses. The gas company can always be relied upon to assist the water company, for example, in all attempts to resist the law and plunder the public under the forms of law. Both will unite to help any form of actual monopoly in holding its own against any effort to break it down. We should be delivered bound hand and foot into the hands of the enemy, if a gas and water company could manage to unite with the tendencies to industrial and commercial monopolies which exist in our midst.

Private companies then would not ring in any purer atmosphere in city politics than exists at present. They would only change the form of the rottenness and corruption. On the other hand, it is perfectly possible to secure a reform in the city administration, which will result in removing this great evil from our city administration. This general point deserves very careful consideration, because it is one of the sorest points in our democratic form of government. So far our attempts at local government in the large cities, have been mostly failures. Many abuses have also become very evident from time to time in the administration of our federal and state governments. What is the best means of remedying these abuses? One party

says the only way is to take from the government the power to touch these things at all. That is, for fear that the government will do some harm, because of its bad administrative methods we must take away from it all power of doing good. This general plan is the refuge of incompetence and cowardice in all critical junctures.

We might as well face the issue squarely, and make up our minds to solve the problems of administration. One thing is very certain, that unless we do this we need not count on being able to retain our popular form of government in the long run. There is nothing surer in the domain of political science than that the form of government which best furthers the interests of society will persist and remain. If those of us who believe that the democratic form is the best, would see our ideals realized, we can only accomplish it by showing that this form is able to keep the advantages of the other systems and add some of its own which do not attend the other forms. To do this we must improve our administration, which is and always has been the weak point of democratic forms of government. The way to improve our administration is not by trying to abolish it. Such a policy has never, in the long run, worked anything but evil. This is not solving the problem, it is trying to avoid it. Do the best we can, there will still remain a modicum of government administration which we can not get rid of without going back to a state of practical barbarism. And long before civil society would consent to do this, it would acquiesce in any form of government, even in that of a despotism, which would secure to it the most essential conditions of a life worth the name. Indeed, it has been claimed, and that with good reason too, that the real source of the bad administration which is characteristic of our system as a whole, is to be found in the fact that we have reduced the functions of government to such a minimum, that nobody cares about what government may or may not do, except those who have a pecuniary interest in the running of the machine. There is undoubtedly some truth in this view. The true road to government reform is not through the means of diminishing the importance of government action still more since that would leave the same abuse in the government as before, and merely diminish the incentives to their reform. Mis-

use of the power to control the gas undertakings, did not spring from this addition to government functions. The tendency was there and was showing itself in every part of the city government. Removing the management of the gas from the control of the city, will not reform this tendency. It must be attacked from an entirely different side. The whole city service must be removed from politics and put upon a purely business basis. When this is done, we can manage the gas business as well as the policing of the streets. The same argument which would prevent the city from taking the gas works or from keeping them when they are in its possession, would lead to giving up the water works, and then the business of taking care of the streets, and then of the police, etc., etc. Those men who really desire to reform the city civil service, should oppose most vigorously any proposition to still further reduce the interest which the average citizen still possesses in the city government, since it would then be impossible to get any attention at all to administrative problems. The true and only system of securing a pure and efficient administration, lies in getting the state to assume its proper functions, and then it will become evident to all that the only way to have a tolerable state of things is to insist upon a sensible system of administration which can be then more easily obtained. The stake of the citizen in good government must be real and great before he will give adequate attention to the questions of governmental administration. One of the chief reasons why the citizens of this generation have been persuaded to take a livelier interest in city administration, is to be found in the fact that the cities have increased their functions in every direction to such an extent, that the expense of the various undertakings has begun to affect his pocket.

So much for what we may call the general argument. Now let us consider the concrete question as to whether the city of Philadelphia should still continue the management of the gas works. It will be noticed, I am sure, that most of the arguments against retention of the works by the city, except in the case of those interested in the purchase of the works, have been based upon the previous management of the gas works of this city. I think that if our fathers had set out to devise the system of management which should offer the best opportunity for

all manner of crookedness, they could not have found any better system than that which they actually adopted. An irresponsible board is the very worst species of government. Now it is evident that even if all the charges which are commonly made against the gas trust of this city were literally true, word for word, that fact would not by any means prove that the city could not manage the works any better under a different system. Because it failed to achieve good results under the very worst plan of control does not by any means prove that good results cannot be achieved under a good system. In the second place, while the gas trust has undoubtedly laid itself open to grave charges of various kinds, yet, when we come to examine the facts of its management, we shall find the actual results achieved under this worst of systems are not such as to make it clearly evident that we should dispose of the works, even if we could not find any better system than that now in operation. The city has to-day as the result of the gas trust's work, the possession of a very valuable property worth at least fifteen million, if not twenty or twenty five million dollars. It has had a fair quality of gas at a price much lower than the city of New York, which is the only city which can fairly be compared with it. And if we have had our gas trust investigations with no result worth speaking of, we have had at least no such a terrible state of affairs as that displayed in the city of New York, where the gas companies have charged shamefully high prices, and contemptuously bought up legislators and councilmen for a mere song to act as they dictated. The state of affairs in New York, though not bad enough to excite great public disgust in this country, owing to its having many counterparts, seems to English writers on the subject to reveal a state of affairs which could not exist in England for twenty-four hours. They have had just as bad things in England, but they are now beyond the possibility of such scenes.

If we would see what is possible in the management of a public company, we must go to those places where it has been tried under the most favorable circumstances. We Americans can surely, when we once fairly give our attention to the matter, organize and administer as an efficient system of city government as either our English cousins or our German second cous-

ins. There are in England, as said above, some one hundred and sixty public companies which are, on the whole, so well managed that they are quite as often models for the private companies as the latter for them. The relative number of public and private companies is changing continually in favor of the public companies. So sure are the cities in England of the advantages of public ownership that nearly every week, certainly every month, some private company is bought out by the city. These works are often purchased at ridiculously high prices, which shows still further how great an advantage the cities expect to derive from the undertaking. I found a list some time ago in the London *Journal* for Gas-lighting, which gave the prices which some seventeen towns had paid for their gas works. They ranged from one hundred and forty to three hundred and eighty-two. That is, some towns, in order to get rid of the private gas companies, were willing to buy the stock at nearly four times the par value. The average paid was over two hundred per cent. This does not look much as if the road to improvement of our condition lay through private ownership.

In Germany much the same state of affairs exists. They began with the system of private works, but it did not take them long to find out that this was not an ideal system. The gas works of Berlin already referred to above were created in 1845. In 1860 there were two hundred and forty-six gas works in Germany, of which sixty-six belonged to the municipalities, and two hundred to private companies. In 1895 there were six hundred companies, of which two hundred and ninety were public and three hundred and ten were private. That is, in 1860 about twenty-five per cent, were public companies, while in 1895 this number had increased to nearly fifty per cent. Even now the public gas works are more important than the private works, though not so numerous. The capitalized value of all undertakings is nearly double that of private works, being one hundred and forty-three millions, as opposed to seventy-six millions. The inhabitants of the cities in which public works exist amount to seven millions, as opposed to four and one-half in those with private companies. The public works consume more than sixty-five per cent, of all the coal used in the manufacture of gas. The tendency is steadily toward the assumption of the works by

the municipality. Of the one hundred and sixty-four leading cities, eighty-eight are supplied by municipal works.

In France we find a different state of things. Here only a small per cent. of the cities own the works. The reason for this is to be found mainly in the fact that there is no such thing in France as local government in our or the English or even the German sense of the term. As a result, whenever it is proposed that the state shall do anything, they think of the general government, and of course nobody proposes to have the general government undertake the business of furnishing gas to the municipalities. The result of this system of purely private companies is to be seen in the fact that many, or rather, most towns in France have not the advantage of gas to any great extent. The single city of Paris uses more gas than all the rest of France put together.

This fact in regard to Germany and England is full of significance for us. In both countries they have given all systems of management a fair chance, and as a result of the experience of the last fifty years, they are going over to the system of city ownership and city control as rapidly as possible. They tried the system of letting the private gas companies compete with one another in order to see whether this plan would furnish cheap and good gas. This system is now given up finally and forever in both countries. They next tried the system of regulated companies with practical monopolies. They tried all manner of devices to secure an effectual regulation of the companies. In England, for example, they prescribed the maximum price which they might charge for gas, they prescribed the quality *i. e.*, strength and purity, and then fixed the maximum dividend providing that all surplus should be used in reductions of price to consumers. They next adopted the so-called sliding scale, that is, they fixed a maximum price and normal dividend, but provided that, for every deduction in the price of gas to the consumer, they might declare an increased dividend. The increase allowed was one-fourth per cent. dividend for every reduction of penny in the price. This last device has been the most satisfactory on the whole. But any such a system pre-supposes the most entire publicity in the affairs of the company, and the closest supervision of its business by public officials, and where-

ever a city has a civil service which will adequately protect its interests by such supervision, it has also a civil service which could manage the gas works themselves to the great advantage of the city itself. In spite of all these safeguards and restrictions, the complaints are so constant and so well taken in many cases, that as a result, the corporations are purchasing the works as fast as they reasonably can. Now if neither England nor Germany, with their enormously greater facilities for close and exact supervision, have been able to put up with the evils which arise from private management, surely we have but small chance.

In this connection I should like to read a portion of a letter which I received a few weeks ago from Mr. Arthur Silverthorne —the man in England who, perhaps, of all men there, has given most attention to this subject of the comparative working of municipal and private companies, and the author of several works of great merit on gas and water works.

"I have never swerved," he writes, "for a moment from the opinion that borough monopolies in the form of public companies (that is what we call private gas monopolies, such as it is proposed to establish here in Philadelphia), afford the very worst form of despotism that a community can be subject to, and I feel great surprise that anything can ever be urged in their favor. The gradual repeal of these monopolies (for the movement is still in progress) has led to cheaper gas, richer gas and poorer gas. From the moment our English municipalities succeeded in wresting the management of these concerns from the lethargic handling of these private companies, the gas corporations set such an example of improved working that it completely awoke the modern Rip Van Winkles, so much so that they have never ceased to imitate the municipal management, and in a large measure have later emulated the prosperity of the town-managed gas undertakings.

"I say, without fear of contradiction, that from a scientific point of view, twenty years ago the cities found the production of gas, owing to the inefficiency of management, a mere distillation of tar, conducted without any regard to scientific laws. The distillation of coal is now, on the contrary, owing largely to the influence of the public example, conducted on the most

scientific principles ; residuals that were thrown away by our predecessors are now properly manufactured into useful products, and the influence of scientific method is present at every stage of the process. The proper extraction of carbonic acid gas alone was a source of increased light unthought of by the old style manager. In the same category may be put the development of ammonia as a means of reducing the cost of manufacture. But the public companies have done a great deal more than the private companies can ever achieve. They have redeemed our capital debts and lightened public taxation."

The experience of English cities, then, according to Mr. Silverthorne, is plainly in favor of public management, and that, in spite of the fact already alluded to, that the corporations, in seeking to acquire gas undertakings in England have invariably had to contend against very exorbitant prices. The only means of relief was to get Parliament to allow them to start rival works and compete with the private company. This was forbidden by act of Parliament in 1872, which practically put the municipality at the mercy of the private companies. All purchases since 1872 have been on terms agreed, which really means at the terms of the companies.

The inordinate length and cost of arbitration has contributed in a great degree to this result, and, as a consequence, some of the principal rules of value have been greatly neglected, and now, consequent on the remarkable success of certain municipal undertakings, every imaginable device is resorted to in order to secure the value of the plant, thus taking frequently the extravagant form of claims for back dividends, compulsory purchase of unused capital—all this in addition to maximum dividends allowed by law.

And yet, in spite of all these things, the rule of private monopolies is so unbearable that the municipalities are continually buying them out at their own enormous prices.

There is still another reason why it should be bad policy for the city to sell its works. It would have to agree to allow the company to charge a certain rate for the gas which it manufactured ; this rate would be based upon the present supposed cost of gas : the company proposes to get the privilege to charge \$1.60 per thousand feet. Now any such arrangement as this

binds the city to pay this price, no matter how cheap the processes of manufacture become; it may very well be, that the processes may be so very much improved, that gas could be manufactured for twenty-five cents per thousand feet. We should still have to go on paying a price which would represent a profit of five or six hundred per cent.—in a word we should thereby shut ourselves off from any participation in the means by which the cost of production may be lessened.

If we should limit the dividends which the company might take as has been done in many European cities, we should find that after the companies had reached the maximum, they would have no interest in cheapening the process to any extent, since only the public would profit by such a change. If we propose to take possession of the works after a certain period, and allow the companies to charge what they please in the meantime, we should find as other cities have found, that as the time approached at which they had to give up the works, they would cease to make any improvements and let the plant deteriorate until its value would amount to next to nothing.

It may be said that the city takes the risk of having the value of the works depreciate upon its hands, by the development of electric lighting to such an extent as to make them practically worthless. It is evident that is not the opinion of private parties who offer a fair price for the plant. In the first place, such a supposition is a mere supposition which is by no means justified from anything which we have thus far seen. In the second place, the public would bind itself to use gas at \$1.60 per thousand, instead of electric light at ten cents for an equivalent amount of light, if it handed over the works to a private company, and allowed it to charge \$1.60 per thousand; that is to say it would have to stand the loss, after all, the only difference would be that instead of a loss which would be represented by hundreds of thousands, it would be a loss of millions. Besides, the loss will have to be borne by the consumers, which ever way you turn it, since private companies are sure to charge a rate of insurance which will recoup them for any possible loss which the consumers will have to pay. The difference in the price of gas which we need pay the city, and that which the private company will charge would build up a sinking fund, which would

pay for the loss of the gas works from depreciation, ten times over.

There is still another reason why we should keep our gas works; they may become a very important source of revenue. It has been shown above, that such works can be managed as well by the public, as by private corporations. Now suppose, for sake of argument, that the price of gas should be fixed at \$1.60 per thousand feet, and the consumption remains at its present amount, let us see how much revenue this city might derive from our present works. We have, I am sorry to say no means of determining exactly how cheap gas can be made in the city, since the reports of our Gas Trust do not give us the information which we need in order to be quite exact. But we have figures from other places which may be of some assistance to us.

In England at the present time, gas is manufactured at a net cost of thirty cents per thousand feet; some works in New England, now manufacture it for thirty eight cents per thousand feet in the holder, from the same coal as that used in Philadelphia. During the Gas Trust investigation, of 1881, Mr. Kennedy offered to give security in any amount, if the city would give him the contract to supply gas to city holders at, sixty two cents per thousand feet. In an address to the American Gas Light Association in 1883 its President at that time, Mr. Theobald Forstall, said: "For the first half of 1883 the cost of gas delivered to consumers by the South Metropolitan Company (of London) was 39.65 cents, and by the Chartered Company, 44.90 cents, the average being 43 cents on the whole quantity sold by both companies. Of the items making up this cost, two only are lower than the corresponding items in New York, viz., coal and labor. The net cost of coal, less residuals, was 9.60 cents per 1000 cubic feet, sold for South Metropolitan, and 13.33 cents for the Chartered Company. In New York the greater price of coal and the lower value of residuals would bring the net cost of coal up to 25 cents per 1000. The cost of labor and superintendence at the works of the London companies is 9.11 cents and 8.38 cents respectively. This in New York would be amply covered by 15 cents per 1000.

"To a single company, then, supplying the whole island, the cost of 16 candle-power gas would stand about as follows:

Coal, net cost per 1000 sold, less residuals,	25
Labor and superintendence, per 1000 sold,	15
Retorts, purifying material, etc.	05
—	
Cost in holder,	45
Repairs, distribution, taxes and general expenses	20
—	
Total cost delivered, per 1000 sold,	65

"These figures are based upon actual expenses in other cities not more favorably situated than New York, which later I have taken as a type of all the larger cities of the Union." Thus, according to the testimony of an expert in the business, gas could be furnished in New York to-day at sixty-five cents per thousand feet to the consumers by a private company. It certainly could be furnished quite as cheaply here in Philadelphia. If the prices were \$1.60 therefore, this would allow a clear profit of ninety-five cents per thousand feet, which at the present consumption would represent a profit of nearly \$2,000,000 per year to the city. It can easily be seen that a very large reduction in price could be made to the consumer, and still a very handsome profit realized for the city. The diminution in price would probably lead to a largely increased consumption which would go far towards keeping up the gross profit to the city. The City of Nottingham in England took possession of the gas works in 1875, when the price of gas was eighty-three and a half cents per thousand feet, and the consumption was almost 500,000,000 cubic feet. In 1877 the price was seventy cents, and the consumption, 623,000,000, and as the price was lowered to sixty-six and two thirds, sixty-two, fifty-eight and fifty-four cents respectively, the consumption rose to 723,891,100 and 1106 million cubic feet, while the profit on the undertaking, rose from \$25,000, to 60, 70, 115, 155 and 165,000 dollars, for the corresponding year, i. e. the price was lowered in eight years less than twenty-five per cent., while the consumption nearly doubled, and the profit increased about 600 per cent., a striking testimonial to the excellence of public management, as compared with the previous private management, as well as of the large increase in consumption and consequent profits which may follow a small reduction in price. There is no reason

except poor management, why the city should not derive an increase of \$1,000,000 per year from the gas works, while it lets the consumer have gas at \$1.00 or less per thousand feet. The London Companies sell gas at sixty five cents per thousand feet and still make twelve and thirteen per cent. dividends.

This source of revenue should not be overlooked at the present time. This community is in need of many great improvements—better water, better streets, better schools &c., &c It is almost impossible to persuade the people to put up with a higher tax rate, and to sacrifice such fruitful sources of income when they can be so easily exploited without oppressing any one, would in my opinion be the very height of folly.

It is very pertinent of course in this connection, to ask what form the management of the works should take. I think that there is only one safe form, viz., that of a City Department with a Chief appointed by the Mayor, and assisted by a number of competent engineers selected with a view to their fitness. The engineers and all other subordinate employees, should be appointed on the basis of a competitive examination, and should be irremovable, except for inability to discharge their duty or for neglect of it, and on demand of the person removed, the chief should be required to state the same in writing, and send it to the Councils. The works must be in direct charge of professional engineers and the service must be absolutely divorced from politics, and the sooner we citizens of Philadelphia recognize this fact the better. With such a service as this we may be secure from the corrupting influence of a gas trust Machine, of the equally corrupting influence of a private gas company ; we may have good and cheap gas, and lower taxes.

Before leaving this point, it may be worth while to call attention to the fact, that even our gas trust has given us, relatively speaking, cheap gas. In 1884 the price of coal gas varied from \$4.00 in Galveston, Texas, to \$1.00 in places like Chicago, and a few others, where gas wars were raging. Other large cities have had to pay considerably more than we, besides paying taxes for the support of the public lamps, and having nothing to show for it all except gas consumed, while we have a most valuable plant free from debt, and worth including the franchise fifteen or twenty millions of dollars.

In closing, let us summarize briefly the conclusions which we have reached.

I.—A good supply of pure and strong gas at low prices has become an absolute necessity of life in our modern city. It is necessary to the comfort of the home as well as to the efficiency of industry and trade.

II.—The technical and administrative conditions of the manufacture and distribution of gas, make the business a practical monopoly.

III.—We must choose then, between a monopoly managed by the public in the interests of the public, and a monopoly in the hands of private parties who, to judge from all experience, will fleece the public to the utmost extent.

IV.—The common argument against the public management that it is necessarily more expensive than private management, is not well grounded, either in reason or fact, since a careful analysis of the case shows that there are some reasons why public companies can, as a rule, manufacture more cheaply than private companies, and a study on statistics shows that public companies where properly organized are able to show at least as good results so far as cheapness and quality of manufacture are concerned as the private companies.

V.—The argument that if private works manufacture the gas, they will not take part in politics in such a way as to bring about the results inevitably connected with public works, is not well taken either ; for it is perfectly possible to get rid of the worst effects of public ownership by a properly organized civil service, while the evil is not remedied by transferring the management of such works to the private companies, but all that is accomplished is that the form of evil is changed. The private companies do not go out of politics, on the contrary they devote the whole of their ability to the attempt to avoid the restrictions and regulations which the public must in pure self-defense impose. They go into the councils and into the legislatures and buy up councilmen and legislators in the most shameless way. They bribe the inspecting officers, and do not stop at anything which seems to promise any assistance.

VI.—This action in politics is very evident by its fruits since no country in the world has been able to secure effective

supervision, which has not at the same time been fully able to manage the works through the government. It is idle to expect to be able to keep the companies within bounds. The only way is to assume the management by the city.

VII.—So far as Philadelphia is concerned, it would be the grossest folly for her to sell the gas works. The property is of considerable value, and no company would propose to give what it is really worth. We are now ready to take possession of the whole works, and it is now possible for the first time in our history to introduce a sensible system of management. To sell them now would be to hand ourselves over soul and body to a type of monopoly which, wherever it has been able to establish itself, has been peculiarly obstinate and unscrupulous. We should have to pledge ourselves not to share in any of the improvements in the system of lighting for the period of the charter. We should have to give up all idea of having cheap gas, and all the advantages which this boon would bring with it. We should lose a valuable source of income to the city. There is no reason why the city should not put the price very low, and at the same time make a handsome profit. By handing over the works to a private company, we should open the way for an enormous corrupting machine to carry on its work in our very midst, with which every city, both in this country and England, has proved itself unable to cope and give up a system which we are just now learning how to control so as to get rid of the worst forms of abuse.

Let us put it in another way: are you in favor of paying double prices for gas? Then vote to let a private company get the monopoly of the business. Are you in favor to agree not to take any advantage of any new discoveries in the system of artificial lighting for the next twenty years? Then vote to sell the gas works to a private company. Are you in favor of erecting a company within the city whose interest it will be to join hand in hand with every form of monopoly which now curses us? Then vote to start a private gas company. Are you in favor of diminishing the interest which the citizens now feel in the administration by taking away the most important functions? Then hand over to a private company the business of looking after the gas supply. Are you in favor of still further limiting

the use of gas and thus diminishing the comfort of thousands of citizens? Then vote to hand the business over to a private company. Are you in favor of making it more difficult for Philadelphia merchants and manufacturers to compete with those of other cities and countries? Then vote to deliver them over to the tender mercies of a private monopoly.

On the other hand, if you would like to see low prices for gas with all which that implies, if you would see the comfort of every house in Philadelphia enormously increased by the general application of gas to heating, cooking and manufacturing, if you would like to be in a position to avail yourselves within twenty-four hours of all improvements in the system of gas or other lighting, if you would like to see your tax bills lower, your city government become more economical, if you would see every interest take a greater share in the government of the city, if you would like to see the service of the city put upon a non-partisan basis, then by all means put forth all your effort to keep the city from doing such a foolish thing as to sell this very valuable franchise and to bind herself hand and foot to do the bidding of still another unscrupulous and all powerful private corporation.

